The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any fee shortages or credit any overages Deposit Account No. 50-1302.

Respectfully submitted,

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Separate Paper with Statement of Status and Explanation of Support for All Changes to the Claims
to Accompany Reissue Patent Application

STATEMENT OF STATUS AND EXPLANATION OF SUPPORT FOR ALL

CHANGES TO THE CLAIMS AS REQUIRED BY 37 C.F.R. §1.173(c)

TO ACCOMPANY REISSUE PATENT APPLICATION

STATUS OF CLAIMS

Claims 1 - 89 are **pending** in the application after the entry of this amendment.

No claims have been **cancelled**.

Claims 7, 12, 15, 26, 28, 29, 36, 38, and 39 have **NOT been amended**.

Claims 9, 11, 13, 14, 16-21, 27, 30, 31, 37, 40, and 41 have been **amended** to make *minor editorial changes* and are fully supported by at least their respective original claims in the disclosure.

Claims 1-6, 8, 10, 22-25, and 32-35 have been **amended** by this preliminary amendment and are supported by at least the portions of the disclosure listed below.

Claims 42-89 have been **added** by this preliminary amendment and are supported by at least the portions of the disclosure listed below.

SUPPORT FOR CHANGES TO CLAIMS

As noted above, Claims 9, 11, 13, 14, 16-21, 27, 30, 31, 37, 40, and 41 have been amended to make minor editorial changes and are fully supported by at least their respective original claims in the disclosure.

Claims 1, 22, 32 are supported by at least FIGS. 2, 3A, 3B, 4, 5A, and 5B and the related discussion in the specification in Columns 5-13. For example, those portions of the disclosure describe embodiments that include either a snapshot worker 206 (FIGS. 4, 5A, and 5B) or a set of snapshot workers 206-214 (FIGS. 2, 3A, and 3B) that obtain snapshot times (e.g., steps 312, 314 and 510, 512). The snapshot worker(s) then retrieve the data from the database 204 (e.g., steps 318 and 518), store the data in a set of flat files 220-226 (e.g., 322 and 518), and then a set of loader workers 230-236 store a copy of the data in the snapshot table database 240 (e.g., steps 328 and 524). The memory based planner 202 then accesses the copy of the data from snapshot table database 240 (e.g., steps 336 and 532).

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Claims 2, 23, 33 are supported by at least FIGS. 2 and 4 that depict snapshot table database 240 storing a copy of the data extracted from database 204, such as by following the examples of FIGS 3A and 3B and FIGS 5A and 5B, respectively.

Claims 3, 24, 34 are supported by at least FIGS. 2 and 4 that depict a set of flat files 220-226 and loader workers 230-236, and by FIGS. 3A and 3B and FIGS. 5A and 5B, respectively, that depict loader workers 230-236 copying the data from flat files 220-228 to snapshot table database 240 (e.g., steps 328 and 524).

Claims 4, 25, 35 are supported by at least FIGS. 3A, 3B, 5A, and 5B that described snapshot worker 206 or snapshot workers 206-214, respectively, informing coordinator 216 that the data from database 204 has been copied to flat files 220-226 (e.g., steps 322 and 518). Further, FIGS. 3A, 3B, 5A, and 5B describe coordinator 216 directing loader workers 230-236 to copy data from flat files 220-226 to snapshot table database 240 (e.g., steps 328 and 524) after coordinator 216 is informed that snapshot workers 206-214 have copied the data to flat files 220-226 (e.g., steps 322 and 518).

Claim 5 is supported by at least FIGS. 2 and 4 that depict a plurality of flat files 220-226 and a plurality of loader processes 230-236.

Claim 6 is supported by at least FIGS. 2, 3A, 3B, 4, 5A, and 5B that describe copying data from database 204 (e.g., steps 322 and 518), which creates a first copy data in flat files 220-226, and then copying the data from flat files 220-226 (e.g., steps 328 and 524), which creates a second copy of the data in snapshot table database 240.

Claim 8 is supported by at least FIGS. 2 and 4 that depict a set of delete workers 242-248.

Claim 10 is supported by at least FIGS. 2, 3A, 3B, 4, 5A, and 5B that describe a set of flat files 220-226 and the memory based planner 202 being notified that the data has been copied to snapshot table database 240 (e.g., steps 334 and 530), with memory based planner 202 then generating a planning schedule based on the data in snapshot table database 240 (e.g., steps 336 and 532).

Claims 42 and 66 are supported by at least FIGS. 2, 3A, and 6 that describe coordinator 216 requesting a plurality of snapshot workers 206-215 to obtain snapshot times (e.g., step 312) and then snapshot workers 206-214 retrieving a copy of the data from database 204 (e.g., step 318). Consistency of the state of the database between the

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set of snapshot times may be ensured in a number of ways, including but not limited to the locking of the database for a time period during which snapshot times are obtained or by using a "set transaction read only" command, as described in Columns 6 and 7.

Claims 43 and 67 are supported by at least FIGS. 2A and 2B and the related discussion in Columns 6 and 7 of the specification that explain that the snapshot times are successfully obtained by snapshot workers 206-214, but not snapshot worker 215. As a result, snapshot workers 206-214 will obtain data from the same state of database 204.

Claims 44 and 68 are supported by at least Column 6, line 51 to Column 7, lines 8 describes the use of a "set transaction read only" command to ensure that all subsequent reads by a process for a transaction return data as of the time of the command.

Claims 45 and 69 are supported by at least Column 5, line 66 - Column 6, line 8 and Column 8, line 65 - Column 9, line 10 that explain that the snapshot workers obtain snapshot times from the database management system (DBMS) that assigns the snapshot times when the snapshot workers solicit the snapshot times from the DBMS.

Claims 46 and 70 are supported by at least FIG. 3A that describes the coordinator 216 coordinating the retrieval of the data from database 204 by snapshot workers 206-214 (e.g., step 318). As described in the specification in Column 9, lines 14-22, each snapshot worker is assigned a portion of the data to be copied. For example, snapshot worker 206 may be assigned to copy database table "17" from database 204.

Claims 47, 48, 71, and 72 are supported by at least Column 7, lines 9-20, which describes that snapshot workers 206-214 are successful snapshot workers because their snapshot times were obtained prior to the expiration of T_WAIT. In contrast, snapshot worker 215 does not succeed because snapshot worker 215 is assumed to have not obtained a snapshot time prior to the expiration of T_WAIT.

Claims 49, 50, 73, and 74 are supported by at least by FIG. 3A that describes coordinating retrieval of the data from a database (e.g., step 318) after releasing the locks on the tables (e.g., step 316) and by Column 7, lines 28-47 that describes an embodiment in which snapshot workers are not required to wait until the end of the T_WAIT period of time before beginning to retrieve data from database 204.

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Claims 51 and 75 are supported by at least FIG. 3A that describes locking the tables identified in the data copy table list (e.g., step 310) and by Column 6, lines 39-50 that describe the snapshot times being assigned after the desired tables are locked and before the locks are released (e.g., T_WAIT).

Claims 52 and 76 are supported by at least FIGS. 2, 3A, 4, and 5A that describe copying data from database 204 to flat files 220-226 (e.g., steps 322 and 518) and by original Claims 11, 27, and 37 that feature "storing the copy of the first set of data separate from said first [set] of data."

Claims 53 and 77 are supported by at least FIG. 6 and Column 14, lines 14-25 that describe snapshot workers 206-214 storing the copy of the data from database 204 directly in snapshot table database 240.

Claims 54 and 78 are supported by at least Column 14, lines 26-34 that describe data from database 204 directly in snapshot table database 240 as "large binary objects" (BLOBS).

Claims 55, 56, 79, and 80 are supported by at least Column 14, lines 35-42 that describe snapshot workers 206-214 retrieving data from database 204 and storing a copy as separate data back into database 204, such as in the form of BLOBS.

Claims 57 and 81 are supported by at least FIGS. 2, 3A, 3B, 4, 5A, and 5B and related discussion in the specification in Columns 5-13. For example, those portions of the disclosure describe embodiments that include either a snapshot worker 206 (FIGS. 4, 5A, and 5B) or a set of snapshot workers 206-214 (FIGS. 2, 3A, and 3B) that obtain snapshot times. The snapshot workers then retrieve the data from the database 204, store the data in a set of flat files 220-226, and then a set of loader workers 230-236 store a copy of the data in the snapshot table database 240. The memory based planner 202 then accesses the copy of the data from snapshot table database 240.

Claims 58 and 82 are supported by at least FIG. 2 that depicts flat files 220-226, snapshot workers 206-214, loader workers 230-238, and snapshot table database 240.

Claims 59 and 83 are supported by at least FIGS. 3A and 3B and FIGS. 5A and 5B that describe snapshot worker 206 or snapshot workers 206-214, respectively, informing coordinator 216 that the data from database 204 has been copied to flat files 220-226 (e.g., steps 322 and 518). Further, FIGS. 3A and 3B and FIGS. 5A and 5B

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describe coordinator 216 directing loader workers 230-236 to copy data from flat files 220-226 to snapshot table database 240 (e.g., steps 328 and 524) after coordinator 216 is informed that snapshot workers 206-214 have copied the data to flat files 220-226 (e.g., steps 322 and 518).

Claims 60 and 84 are supported by at least FIGS. 2, 3A, 3B, 4, 5A, and 5B that describe memory based planner 202 generating a planning schedule based on the data in snapshot table database 240 (e.g., steps 336 and 532).

Claims 61 and 85 are supported by at least FIGS. 2, 3A, 3B, 4, 5A, 5B, and Column 10, lines 50-56 that described memory based planner 202 using the information in flat files 220-226 to generate the planning schedule (e.g., step 336)

Claims 62, 63, 86, and 87 are supported by at least Column 5, lines 41-65 and Column 6, lines 21-46 that describe how generation of a planning schedule typically requires data from a subset of the tables in database 204, the use of a copy table list 218 that lists the database tables (1...N) in database 204 that are needed for the planning schedule (e.g., the "desired tables"), the locking of the identified tables, and the retrieval of data from the desired tables by the snapshot workers.

Claims 64 and 88 are supported by at least FIGS. 2, 3A, 3B, 4, 5A, 5B and Column 8, lines that describe launching delete workers 242-248 using copy table list 218 to delete stale data in the snapshot tables in snapshot table database 240 (e.g., steps 320 and 516).

Claims 65 and 89 are supported by at least FIGS. 3A and 5A that describe snapshot worker 206 determining which tables of database 204 are required by the memory based planner 202 for generation the planning schedule and generating copy table list 218 based on this information (e.g., steps 306 and 506), and by original Claims 9 that features "communicating with the software application to identify a set of planning data...and creating the copy table list based on the identified set of planning data."